

WHAT IS CLAIMED IS:

1. A radiation image photographing apparatus
for detecting radiation comprising:

a radiation detecting panel for converting
5 received radiation into an electrical signal;

a support substrate for supporting the
radiation detecting panel; and

a housing for containing the radiation
detecting panel and the support substrate;

10 wherein a surface of the support substrate for
supporting the radiation detecting panel is made flat,
and a plurality of openings are formed on a side of a
surface of the support substrate, which is opposite
to the surface of the support substrate for
15 supporting the radiation detecting panel in a
thickness direction.

2. An apparatus according to claim 1, further
comprising a first reinforcing plate for reinforcing
20 the support substrate, and wherein the first
reinforcing plate is fixed such that the openings can
be covered with the first reinforcing plate.

3. An apparatus according to claim 2, wherein
25 the first reinforcing plate is formed of fiber-
reinforced plastics, fiber-reinforced metal, or
aluminum alloy.

4. An apparatus according to claim 2, wherein an opening is provided in a portion of the first reinforcing plate.

5 5. An apparatus according to claim 4, further comprising a circuit board which is interposed between the first reinforcing plate and a lower portion of the housing, and to which an electrical component for controlling the radiation detecting
10 panel is mounted, and wherein a portion of the electrical component is inserted in the opening of the first reinforcing plate.

6. An apparatus according to claim 1, further
15 comprising a second sensor for detecting the amount of radiation, and wherein the second sensor is inserted in the opening of the support substrate.

7. An apparatus according to claim 6, wherein
20 the second sensor is comprised of a plurality of divided detecting devices, and the detecting devices are inserted in the openings which are independently formed, respectively.

25 8. An apparatus according to claim 1, further comprising a second reinforcing plate for opposing warp due to a difference in a linear expansion.

coefficient between the first reinforcing plate and the support substrate, and wherein the second reinforcing plate is fixed to the support substrate on a side of the radiation detecting panel.

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9. An apparatus according to claim 8, wherein the linear expansion coefficient of the second reinforcing plate has digit of index number the same as the linear expansion coefficient of the first
10 reinforcing plate.

10. An apparatus according to claim 8, wherein the second reinforcing plate is formed of fiber-reinforced plastics, tungsten, tantalum, or
15 molybdenum.

11. An apparatus according to claim 8, wherein the second reinforcing plate is a radiation shielding member.

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12. An apparatus according to claim 1, wherein the radiation detecting panel is constructed by layering a fluorescent member for converting radiation into visible light, a grid-like arranged
25 optoelectrical converting device for converting the visible light into an electrical signal, and a substrate on a surface of which the optoelectrical

converting device is formed.

13. A radiation image photographing apparatus
for detecting radiation comprising:

5 a radiation detecting panel for converting
received radiation into an electrical signal;

 a support substrate for supporting the
radiation detecting panel; and

 a housing for containing the radiation
10 detecting panel and the support substrate;

 wherein a surface of the support substrate for
supporting the radiation detecting panel is made flat,
and the support substrate is shaped into a hollow
structure.

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